

7.1 Solving Linear Systems by Graphing

Linear System: 2 equations that relate

$$\begin{cases} 3x + 2y = 4 \\ -x + 3y = -5 \end{cases}$$

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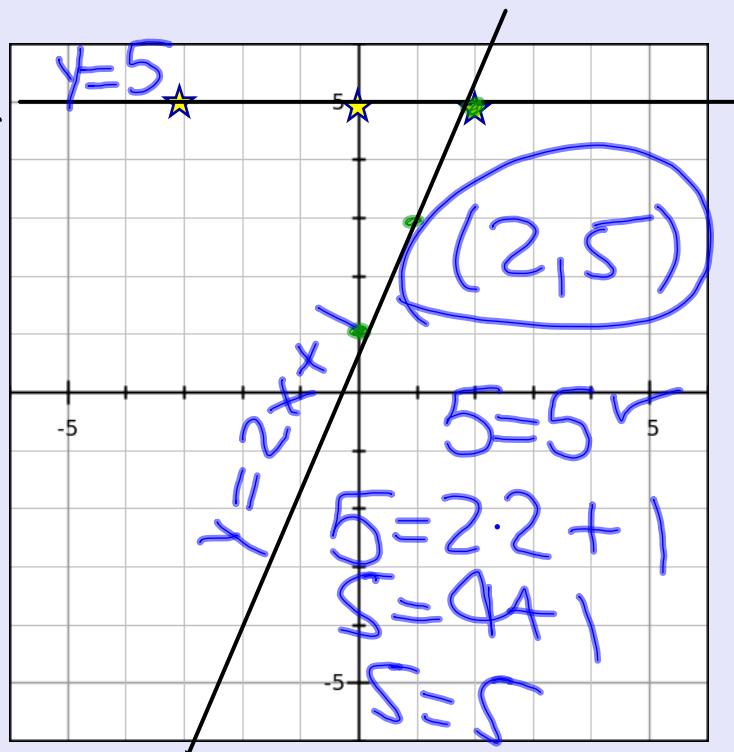
Solving a linear system by graphing

- 1 Write equations in $y = mx + b$
- 2 Graph both equations
- 3 Estimate the point of intersection
- 4 Write the intersection point as an ordered pair...This is the solution!
- 5 both equations. Ordered pair must be a solution to both equations to be a solution to the system.

Solve the system by graphing. Check answers algebraically.

1. $y = 5$
 $y = 2x + 1$

x	y
-2	5
0	5
2	5



2. $3x + y = 11$
 $x - 2y = 6$

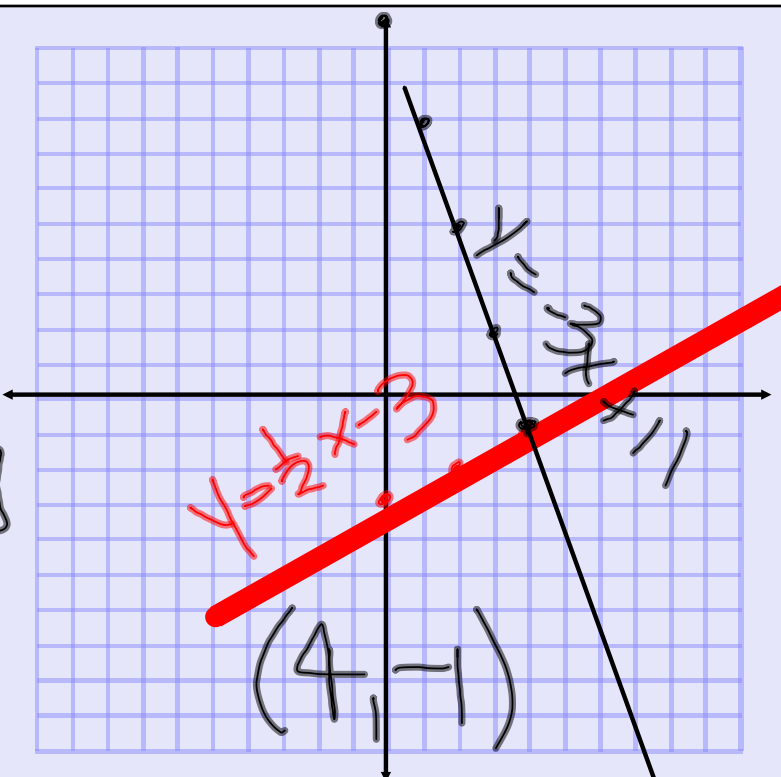
$$3x + y = 11$$

$$\begin{array}{r} -3x \quad -3x \\ \hline y = -3x + 11 \end{array}$$

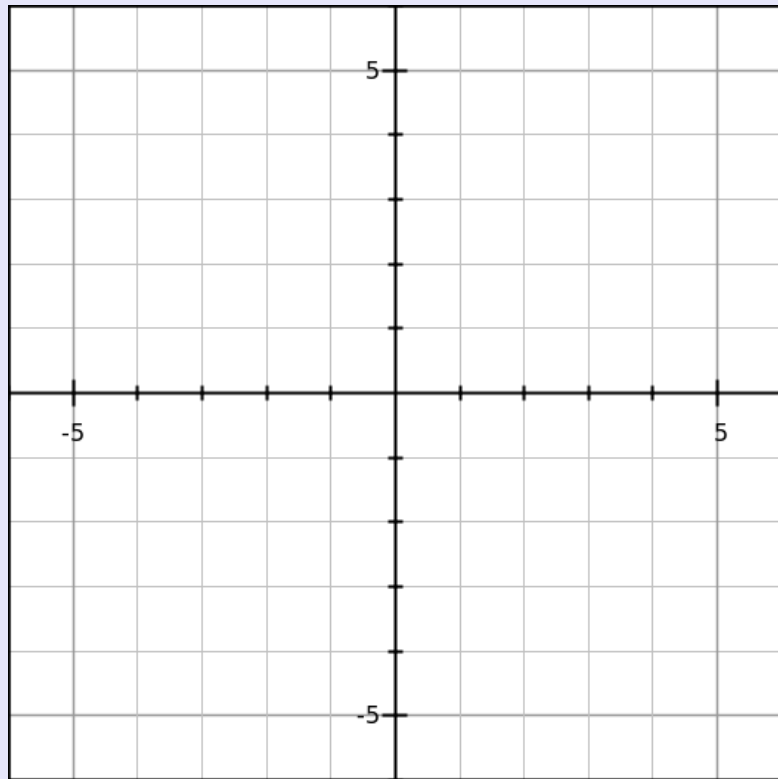
$$x - 2y = 6$$

$$\begin{array}{r} -x \quad -x \\ -2y = -x + 6 \\ \hline -2 \quad 2 \quad -2 \end{array}$$

$$y = \frac{1}{2}x - 3$$



3. $-2x + y = 2$
 $x + y = -1$



HOMEWORK!